

Application No. 09/831,598
Art Unit 1621
February 4, 2004
Reply to Office Action of November 4, 2003

REMARKS

Claims 1-13 are pending in this application. Claims 3-13 have been withdrawn from consideration.

Because the product claims are being considered herein (claims 1-2), Applicants respectfully request rejoinder and allowance of the withdrawn claims in Group II (claims 3-13) if the product claims are found allowable. *In re Ochiai*, 37 USPQ2d 1127 (CAFC 1995).

In view of the following remarks, Applicants respectfully request that the Examiner withdraw all rejections and allow the currently pending claims.

Priority

The Examiner has acknowledged priority based on Japanese Application No. 1998/323496, filed November 13, 1998, but has indicated that a certified copy thereof has not been received. Applicants submit that such a copy should have been forwarded by the International Bureau to the USPTO. Still, Applicants enclosed herewith a certified copy of Japanese Application No. 1998/323496.

Issues Under 35 U.S.C. § 102(a)

Claims 1 and 2 stand rejected under 35 U.S.C. § 102(a) as being anticipated by Yasua Hibino et al. (EP 0 864 554 A1; hereinafter "EP '554"), as stated at page 3 of the Office Action (the Office Action

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incorrectly cites EP 0 864 551 A1). Applicants respectfully traverse since the cited reference fails to disclose all features as instantly claimed.

The Present Invention

The present invention is directed to an azeotropic composition consisting of 1,1,1,3,3-pentafluoropropane ("R-245fa") and 1,1,1-trifluoro-3-chloro-2-propene ("R-1233zd") (see claim 1). In another embodiment of the present invention (claim 2), the molar ratio of 1,1,1,3,3-pentafluoropropane to the 1,1,1-trifluoro-3-chloro-2-propene of the azeotropic composition is in the range of 64/36 to 62/38.

Distinctions over EP '554

The Examiner refers Applicants to Examples 1-10 and Tables 1-11 of EP '554. However, Applicants respectfully submit that EP '554 fails to disclose all features as instantly claimed. For instance, EP '554 fails to disclose the claimed azeotropic composition.

A closer reading of EP '554 reveals that EP '554 fails to disclose an azeotropic composition of 1,1,1,3,3-pentafluoropropane and 1,1,1-trifluoro-3-chloro-2-propene. Instead, the cited EP '554 reference merely discloses a crude mixture of R-245fa and R-1233zd (i.e., see the Abstract). The present invention, on the other hand, is directed to a composition wherein a mixture shows azeotropy at a particular

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temperature and at a particular molar ratio (i.e., see the features of instantly pending claim 2). In other words, the present invention is directed to an azeotropic composition (of 1,1,1,3,3-pentafluoropropane and 1,1,1-trifluoro-3-chloro-2-propene; see claim 1), and not the mixture of EP '554. Thus, this rejection is overcome due to the lack of disclosure present in EP '554.

Further, Applicants respectfully submit that EP '554 fails to disclose or recognize that its compounds show any azeotropic properties. With regard to Examples 1-10 and the Tables of EP '554 (as cited in the Office Action), Applicants respectfully submit that the disclosed mixtures are not an azeotrope as instantly claimed. Two compounds in a mixture that are similar or close in the respective boiling points do not necessarily mean that they will form an azeotropic composition. Azeotropy is distinct from the process or phenomenon wherein a small amount of 1,1,1,3,3-pentafluoropropane, which has a boiling point relatively close to that of 1,1,1-trifluoro-3-chloro-2-propene, is inevitably distilled off together with the 1,1,1-trifluoro-3-chloro-2-propene. In EP '554, there is simply a crude mixture of R-245fa and R-1233zd, but there is no azeotropic composition as instantly claimed.

To further support Applicants' position regarding the disclosure of EP '554, Applicants submit the following calculations. The molecular weight of 1,1,1,3,3-pentafluoropropane is 134; the molecular weight of 1,1,1-trifluoro-3-chloro-2-propene is 130. According to the molar ratio

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of the present invention (i.e., see claim 2), the weight ratio between R-245fa and R-1233zd is in the range of 64.7/35.3 to 62.7/37.3. However, the weight ratios of the "Fresh-Feed" as shown in each of Tables 1-11 of EP '554 does not disclose the weight ratios of the present invention. Thus, Applicants submit that this rejection is overcome because EP '554 does not disclose the claimed azeotropic composition.

In addition, as shown in any one of the distillates in Tables 1-11 of EP '554, the amount of R-1233zd is so small and not right that it cannot form an azeotropic composition with R-245fa as achieved by the present invention. Therefore, Applicants respectfully submit that the EP '554 compositions are merely a mixture of components, and that EP '554 does not disclose an azeotropic composition or azeotropic properties as instantly claimed.

Thus, Applicants respectfully submit that EP '554 fails to disclose the present invention. Because "a claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference," the cited EP '554 reference cannot be a basis for a rejection under § 102(a). See *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Thus, because of the lack of disclosure of all features as instantly claimed, the rejection in view

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of EP '554 is overcome. Reconsideration and withdrawal are respectfully requested.

Conclusion

Applicants respectfully submit that the present invention is patentably distinct over the cited EP '554 reference, and that EP '554 fails to disclose an azeotropic composition of 1,1,1,3,3-pentafluoropropane and 1,1,1-trifluoro-3-chloro-2-propene as instantly claimed.

A full and complete response has been made to all issues as cited in the Office Action. Thus, Applicants respectfully request that a timely Notice of Allowance issue for the present case.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Eugene T. Perez (Reg. No. 48,501) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Respectfully submitted,

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Enclosure:

Certified Copy of Japanese Application No. 1998/323496

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